



Guidance

Curriculum and
Standards

Pedagogy and Practice: Teaching and Learning in Secondary Schools

Unit 10: Group work

**Senior leaders,
subject leaders
and teachers in
secondary schools**

Status: Recommended

Date of issue: 09-2004

Ref: DfES 0433-2004 G

Teaching repertoire



How to use this study guide

This study unit offers some practical strategies that teachers use to engage pupils through group work. The techniques suggested are tried and tested; they draw on both academic research and the experience of practising teachers.

By working through this guide you can build your teaching repertoire step by step, starting with strategies that are easy to implement and moving on to those that will help pupils develop their skills still further. The unit contains 'reflections', to help you reflect on an idea or on your own practice, as well as practical tips and tasks to help you consider advice or try out strategies in your classroom. There are case studies to exemplify particular points, a summary of the research and some suggestions for 'next steps' and further reading. The final page invites you to reflect on the material and to set your personal targets for the future.

You can work through this unit in a number of ways:

- Start small; choose one class to work with. Ask another teacher to help by talking through what you intend to do and to act as a mentor.
- Work with another teacher or group of teachers who teach the same class. Work together on developing your approach to group work. After three weeks compare notes. Discuss which strategies are the most effective and why.
- Find someone to pair up with and team-teach. Design the tasks together and divide the role of teacher in the lesson between you.
- Work with a small group of teacher-researchers within your school. Use the guide to help you focus your work as a professional learning community.
- Identify sections of the unit that are particularly relevant to you and focus on those.

There is space in this study guide for you to write notes and responses to some of the questions, but you may also find it helpful to keep a notebook handy. For some tasks, you might want to make an audio recording or video of yourself in action so you can review your work more easily. You could add this, along with any other notes and planning that you do as part of your work on this unit, to your CPD portfolio.

The evidence of work you gather in your portfolio could count as points towards accreditation of an MA, or could support your application for membership of a professional body, such as the General Teaching Council of England (GTCE). It could also be used to support an application to reach threshold or Advanced Skills Teacher status.

You will need access to [video sequence 10, Group work](#), when working through this unit.

Contents

Introduction	1
1 Group work – considering the research	2
2 What skills can we expect of most Year 7 pupils?	3
3 Organising group work – including it in lessons	4
4 Extending strategies for structuring group work	15
5 Troubleshooting during group work – developing social skills	16
Summary of research	19
Next steps	23
Setting future targets	24

Introduction

Successful group work

Good communication and the ability to work as part of a team are two skills that employers value highly. These skills can be developed through effective use of group work.

When productive group work is a regular feature of lessons, pupils:

- fully develop their understanding of an idea because they have tried to explain it to others or argue a point of view;
- are more likely to develop social and team-working skills.

Group work gives pupils opportunities to:

- practise and to learn from each other;
- develop a sense of empathy and to understand other views;
- develop problem-solving skills.

Common issues

Effective group work does, however, require a significant amount of preparation by the teacher. In addition, pupils need to be able to cooperate with each other. Younger pupils and those from highly disadvantaged backgrounds often lack the skills necessary to interact positively with peers. This can lead to these pupils being unwilling to work in groups and collaborate with each other; when asked to do so they are often off-task and work remains unfinished. As a consequence, such pupils are rarely asked to work in groups or teams.

Resolving the issues

Pupils can, however, be helped to develop the skills needed for working with others and so benefit from learning in this way.

Pupils are more likely to work effectively in groups if the teacher:

- provides clear structures in which groups can operate;
- uses strategies that support positive behaviours and develop group-work skills;
- establishes clear rules and procedures;
- introduces tasks so that outcomes are clear and linked to the behaviours required;
- selects groups to suit the task;
- maintains momentum by effective intervention;
- sets group goals.

1 Group work – considering the research

Teachers, pupils and researchers recognise that group work has many benefits.

Task 1

Why bother with group work and what are the crucial elements for success? 30 minutes

Choose one of your classes with which you would like to use group work more often. Think about these pupils as you complete the task below.

Read the [summary of research](#) on pages 19–22.

The research identifies the following as important issues when thinking about group work:

- giving and receiving help;
- necessary student social skills;
- organisation of the groups.

Think about the pupils on which you are going to focus. Which of these issues do you think is most relevant to their needs at the moment?

2 What skills can we expect of most Year 7 pupils?

When they arrive from primary school, pupils will have worked in groups at some time for every subject. Most will have developed a range of group-work skills and typically Year 7 pupils are able to:

- speak in turn;
- listen to others' points of view;
- participate, respond and make suggestions;
- cooperate within a small group;
- take on a given role (e.g. recorder or chair);
- take a lead role if requested;
- help to make sure that the task is completed;
- engage in exploratory talk.

However, as the research indicates, some pupils from disadvantaged backgrounds may not have well-developed skills.

Task 2

Pupil skills in group work

20 minutes

[Video sequence 10a](#) shows group work in primary schools and how pupils' skills develop over Key Stages 1 and 2. The video shows pupils in a primary school at ages 7 and 11, working in groups. This school is a main feeder to the secondary school shown in a later sequence for [task 3](#).

Watch the video and note what skills you think pupils have. Notice that the skills are built up progressively; this is a result of careful teaching. Notice that the Year 6 teacher takes the time to debrief the group; this is deliberate and part of that careful teaching.

Being aware of the skills that pupils lack is an important first step in developing their ability to work in groups. There are strategies that you can use to improve pupils' skills. [Troubleshooting during group work](#) on pages 16–18 lists some suggestions that others have found useful. Some techniques are suitable for younger pupils, whilst others will be more suitable for older pupils in Key Stage 4.

3 Organising group work – including it in lessons

Like any teaching approach, group work will be harder to introduce and manage successfully with a challenging class; but it is not impossible. If it is made to work, it can improve the learning ethos of the class considerably.

In classes where behaviour is a problem, teachers tend to resort to strategies that strongly encourage individual work (e.g. seating pupils one to a desk). While these strategies may be appropriate to establish control in the short term, they may not promote an effective range of learning skills in the longer term. The key to effective group work is organisation. Even challenging pupils will work effectively in well-organised groups and will follow instructions, provided the instructions are straightforward and direct.

Structuring the learning

Structuring group work tightly can help pupils develop their skills of working with others. Examples of group-work structures which can be fun and enjoyable are listed in [Group discussion strategies](#) on page 15. Once you have tried some of these, you can invent your own.

If you have a challenging class, it is a good idea to introduce group work gradually. A ‘snowball’ (sometimes called ‘twos and fours’) provides a very tight structure and can be an easy way to start. Pupils will respond well, provided you are business-like in your approach and give clear instructions and time markers.

Case study 1

A Year 10 science group was exploring rates of reaction. The class was of middle ability, with a number of pupils prone to off-task behaviour. The teacher wanted pupils to generate as many ideas as possible. She decided to use a snowball to structure their learning and encourage them to discuss ideas. She gave instructions as follows.

Step 1: ‘On your own, write down as many ways as you can that might speed up the reaction between hydrochloric acid and marble. You have 1 minute.’

Step 2: ‘As a pair, compare your lists, agree a set of factors that you think have the best chance of speeding up the reaction and leave to one side those you think are irrelevant. You have 2 minutes.’

Step 3: ‘As a four, select from your lists those two factors that you think will cause the biggest increase and are therefore worth investigating. You have 3 minutes.’

Step 4: ‘As an eight, for each factor you have selected, use what you know about particles to give a reason for the effect you think it will have. You have 10 minutes and then I will ask for your reasons.’

In this example the snowball builds to a group of eight, but it could stop at four.

Task 3

Using a snowball to introduce group work gradually

10 minutes

Watch [video sequence 10b](#), which shows an example of a snowball in the context of MFL. Notice how the teacher gives instructions.

How does the activity the pupils are asked to do vary when they work:

- as individuals?
- in pairs?
- in groups of four?
- in groups of eight?

Notice how the teacher makes sure all will cooperate in a large group (an eight).

Practical tips

Planning a snowball activity

Prepare well and in detail.

Select a simple activity and build to a four to start with.

Plan each question carefully. As a rule of thumb, have:

- a recall task for individuals;
- a comparison task with some decision for pairs;
- a decision-making task with discussion for fours or eights and an opportunity to feed back.

Make sure the seating arrangements allow for pairs and fours to form easily.

Give tight time guidelines and stick to them.

Task 4

Classroom assignment: try a snowball

30 minutes

Try out the snowball technique. Use the examples and the practical tips to plan two different snowball activities for two different classes. You could work with a colleague who teaches the same class and compare notes. Try a 1, 2, 4 first.

Evaluate how the pupils responded.

What do you think were the key learning points for pupils?

Establishing clear rules and procedures

One of the main ways to ensure lessons run smoothly is to establish clear rules and procedures from the start. This is essential when considering the introduction of group work into your lessons.

Task 5

Setting ground rules 1

5 minutes

What would be a good set of ground rules for a group discussion? Add your own ideas to the one below. Aim for a total of no more than six rules.

Ground rules

- Listen to others.
-
-
-
-
-

For rules and procedures to work, they need to be actively taught to pupils. It is best to stick to a small number of rules that are clearly understood and consistently enforced. They need to become a routine part of pupil behaviour. Teachers who engage pupils effectively in group work often spend a lot of time and effort reinforcing the rules at the beginning of the school year. It is important that the teacher not only tells pupils what the rules are, but also explains the reasons they exist. Successful teachers often involve pupils in setting up the rules.

Establishing the ground rules with the participation of the pupils can be done in a single lesson and the rules displayed on a classroom poster. Ultimately, however, the ground rules will be learned only through consistent application and reinforcement over a period of time.

Task 6

Setting ground rules 2

Watch [video sequence 10c](#), which shows a teacher establishing clear rules and procedures for group work.

Notice how the teacher engages the pupils through involving them in setting up the rules and listens to whether groups are abiding by the rules. Also notice how the teacher sums up at the end.

As a variation, each group could create and abide by its own set of rules. The teacher could then discuss with the whole class which group worked best at the end of the exercise and why.

How can you reinforce the rules?

Using praise is more productive than continually highlighting poor behaviour. During group work it is better to reinforce the good behaviours, for example:

‘Well done, Gary. You are listening carefully to others.’

‘I can see you have nearly completed the work. You must have stayed on-task well.’

‘Your group has listened to one another and that helped you complete the task with a good set of results.’

Using the plenary for reflection

The plenary is not only a time when the results of the group task can be presented to the whole class but also one when pupils can be encouraged to reflect. Reflecting on talk helps to develop thinking and learning. A carefully planned plenary can provide effective opportunities for reflection, particularly when pupils are provided with appropriate vocabulary. A list of useful ‘talk’ words can be found below.

Reflecting on the processes involved in working as a group is also important. It is useful to start by asking a relatively successful group to explain what they thought helped their discussion to go well; what problems there were, if any; and how they overcame them.

To develop pupils’ evaluative strategies further, one member of each group could be appointed to observe ways in which a group works together. Using a simple guide list devised by pupils, the observer watches and listens as the group works. At the end of the session, each member of the group writes a short evaluation of their own contribution to the group which can then be compared with the observer’s evaluation in the plenary.

Some useful vocabulary for talk

opinion	agreement	relevant	argument	assertion
alternatives	challenge	discussion	reason	critical
respect	information	thinking together	dialogue	idea
sharing	group	justify	propose	summarise
support	oppose	explanation	suggestion	evaluate
synthesise	clarify	modify	consider	contribute

Introducing tasks to groups

Introducing tasks to groups needs careful handling, particularly if the class includes some challenging pupils. What you say has a big impact on how pupils respond.

Task 7

Introducing group tasks 1

15 minutes

When a task is introduced, pupils need to know:

- the objective;
- what will count as a good outcome;
- how long they have to achieve it;
- how their cooperative behaviour in the group will help to achieve the learning goal;
- the roles they each need to play within the group.

[Case study 2](#) illustrates how an English teacher introduced a task. Annotate the text, identifying where each of the points above is addressed.

Case study 2

In a Year 10 English lesson, the class was discussing nuclear power. The teacher introduced the group task, explaining what the pupils had to do:

‘What I am looking for from each group is a clear summary of the pros and cons of nuclear power, together with a summarising statement that says whether you think it is good or bad for humanity. You will have to decide how best to present your summary: it can be a poster, a chart or an oral presentation lasting no more than 3 minutes.

For top marks you will need to use precise vocabulary and clear sentences. The pros and cons should be succinct and punchy. Your summarising statement should state your position clearly and relate to the evidence.

To do this well you will need to decide who will collect the scientific information, who will collect the political views from the resources available, who will analyse and who will record the decisions. You can only do this if you cooperate fully.

What I am looking for is the group that presents their argument in the most persuasive way.

Okay. Each group has 2 minutes to sort out roles. I will check with you so that you all know what you are doing. You then have 30 minutes to complete the task.’

Task 8

Introducing group tasks 2

25 minutes

Watch [video sequences 10d and 10e](#), which show two teachers introducing group work in their classrooms.

How does each teacher share the objectives of the activity with the pupils?

How are the expected outcomes made clear?

Notice how roles are allocated particularly in [video sequence 10e](#).

Task 9

Classroom assignment: introducing tasks to groups and allocating roles

30 minutes

Design a group activity to try with a class.

Write down the words you will use to introduce the task. (Some researchers have suggested it is helpful to use structures such as 'What I am looking for is ...' or 'This is because ...'.)

Decide the roles pupils will play. (You might like to refer to the list in the [summary of research](#) on page 21.)

Identify the resources you will need.

Choosing and selecting groups

Choice of groups for group work may be predetermined to a certain extent by any setting of classes that has already taken place. Your grouping of pupils might be based on a number of different criteria linked to the outcomes of the activity in which the groups are engaged. You may consider, at different times, factors such as ability, communication skills, social mix, behaviour, gender, SEN, disability and EAL.

Reflection

Think about a class where you have used group work. What influenced your selection of pupils?

Group composition

Task 10

Benefits and limitations of different grouping criteria 15 minutes

Look at the grid below. It shows a range of different criteria for grouping, with their benefits and limitations. The right-hand column indicates when these criteria may support your teaching.

Highlight the issues you have encountered, and add any extra points from your own experience.

Grouping	Benefits	Limitations	When to use
Friendship	Secure and unthreatening	Prone to consensus	When sharing and confidence building are priorities
Ability	Work can more easily be pitched at the optimum level of challenge	Visible in-class setting	When differentiation can only be achieved by task
Structured mix	Ensures a range of views	Reproduces the power relations in society	When diversity is required
Random selection	<ul style="list-style-type: none"> Builds up pupils' experiences of different partners and views Accepted by pupils as democratic 	Can get awkward mixes and 'bad group chemistry'	<ul style="list-style-type: none"> When pupils complain about who is allowed to sit with whom When groups have become stale
Single sex	Socially more comfortable for some	Increases the gender divide	In contexts where one sex habitually loses out, e.g. competing to control the computer keyboard

Group size

Task 11

Benefits and limitations of different-sized groups 30 minutes

Look at the grid below. It shows a range of different-sized groupings with their benefits and limitations. The right-hand column indicates when groups of this size may support your teaching.

Think about one of the classes you teach. Annotate the grid to indicate which benefits and limitations apply for this class.

Ask another teacher who also teaches this class how they approach group working with them. Discuss with your colleague in which lessons or circumstances you would each use the different group sizes.

Select two issues from the limitations column. How would you and your colleague address them if you wanted to use the corresponding group size in a lesson?

Grouping	Benefits	Limitations	When to use
Individual	Has to think for self	Isolated within own experience and knowledge	When you want to be sure it is all their own work
Pair	<ul style="list-style-type: none"> • Obligated to talk • Secure • Unthreatening • No need to move desks • Quick 	<ul style="list-style-type: none"> • Prone to quick consensus • Little challenge from different viewpoints • Allocation of loners can be difficult 	<ul style="list-style-type: none"> • When the topic is personal or sensitive • When you need only a brief discussion
Small group (three to four)	<ul style="list-style-type: none"> • Diversity of opinion without the size of group being too threatening • Turning a pair round can create a table of four without moving desks 	<ul style="list-style-type: none"> • Social pressures begin to set in: 'We always work together'; 'Do we have to work with girls?'; 'I have no one to work with' • Possible for individuals to stay quiet once there are more than two 	<ul style="list-style-type: none"> • To build confidence • To increase social interaction in the class • As an interim stage before whole-class discussion

Task continues

Grouping	Benefits	Limitations	When to use
<p>Large group (five to seven)</p>	<ul style="list-style-type: none"> • Diversity of ideas, experience, opinion • Bridges the gap between small-group experience and contributing to whole-class discussion 	<ul style="list-style-type: none"> • Have to move desks • Requires chairing and social skills • Can easily be dominated • More pupils remain silent 	<ul style="list-style-type: none"> • For discussion requiring a range of views and ideas • For developing teamwork
<p>Whole class</p>	<ul style="list-style-type: none"> • Everyone gets the same experience • Teacher can monitor and support the talk 	<ul style="list-style-type: none"> • Several pupils remain silent • More difficult to contribute and there can be frustration in having to wait, discussion moving on, etc. • Risk of domination by the bright, confident and talkative • Risk of teacher doing most of the talking 	<p>When it is essential that all pupils hear the same messages</p>

Maintaining momentum

It is vital to maintain the momentum of group work. Effective intervention should support pupils through the task without interrupting or interfering. For instance, it is all too easy for a teacher to join a discussion and unintentionally take it over.

Task 12

Strategies for effective intervention

15 minutes

Look at the grid below, which sets out the main reasons for intervention.

Add any other strategies, prompts and questions that you have found useful when intervening during group work.

Choose an activity that you are planning for one of your classes. For each of the reasons for intervention, write a suitable prompt or question that you might be able to use during this particular activity.

Reason for intervention	Strategies, prompts and questions
To focus pupils on the learning	<p>Ask these three questions to focus pupils' attention on the task. (You may have to modify the first two slightly, according to the nature of the task.)</p> <ul style="list-style-type: none"> • What are you trying to find out / do? • What do you think will happen / the answer is likely to be? • Why?
To ensure that pupils are working within the time frame available	<ul style="list-style-type: none"> • Give time markers, e.g. 'You have 10 minutes left', or prompt pupils, e.g. 'How much time do you think you have left? What else needs to be done?' • Ask pupils to map out how they will use the remaining time, e.g. 15 minutes research, 5 minutes discussion. (You could ask them to do this at the start to avoid problems later.)
To support pupils who are stuck on the task	<ul style="list-style-type: none"> • Ask pupils to restate the task in their own words. Ask them to explain their thinking about where they are, then ask them to speculate about the way forward, e.g. 'What do you think we need to do next?' or 'What could we do next? What are the options?' • Provide pupils with a scaffold such as a speaking frame (like a writing frame) to support discussion.

Task continues

Reason for intervention	Strategies, prompts and questions
To support groups who are having problems cooperating with each other	<ul style="list-style-type: none"> • Provide pupils with a group goal. • Allocate different roles to group members. • Restate the learning outcome required and link it to the behaviour required, e.g. 'To do this you will need to cooperate ...'.
To press pupils to take their thinking one step further by asking questions or supplying additional information	<p>Use a hierarchy of questions moving from recall through comprehension, application, analysis and synthesis to evaluation (Bloom's taxonomy).</p> <p>Use question stems that start with:</p> <ul style="list-style-type: none"> • name, state, describe, where, what; • how, why, illustrate, summarise; • use or predict, show me where; • analyse, break this down into, relate this to; • design, create, compose, reorganise; • assess, evaluate, justify.
To correct misunderstandings	Make a judgement about the nature of the misunderstanding. If it is straightforward, then correct it. If it has arisen from a misconception, then use questioning to probe pupils' thinking.
To give pupils feedback on their performance	Pupils respond well to praise, so link the learning to behaviours and force pupils to consider what to do next, e.g. 'As a group you have collected the data and completed the table well; that means you concentrated. Do you think the graph you have drawn matches the data?'

Task 13

Classroom assignment: intervention using questions 1 hour

First watch [video sequence 10f](#), which shows a teacher intervening during group work in an English lesson.

Note how the teacher uses questioning to focus pupils' thinking. She uses many *Why?* and *What does this mean?* questions to promote and stimulate thinking.

Focusing pupils on the learning is important. Arrange a group-work exercise for the pupils in one of your classes. Allow them to get started, and after 3 or 4 minutes approach each group and try out the three focusing questions in [task 12](#). Later intervene by asking questions to promote thinking further.

Evaluate how effective such approaches are.

4 Extending strategies for structuring group work

Once the basic practice and procedures of group work are firmly in place in the classroom, you will be able to embark on new challenges to extend pupils' learning styles and skills. Remember that it is easier to introduce more demanding processes using familiar subject material. Once the group-work strategies are understood, more challenging subject content can be introduced. Here are some alternative ways of structuring group work with examples of their main practice taken from: *Teaching talking and learning in Key Stage 3*, part of the National Curriculum Council and National Oracy Project.

Group discussion strategies

Listening triads: Pupils work in groups of three. One pupil takes on the role of talker, one the role of questioner and one the recorder. The talker explains something, or comments on an issue, or expresses opinions. The questioner prompts and seeks clarification. The recorder makes notes and gives a report at the end of the conversation. Next time, pupils change roles.

Example: Pupils in a Year 9 English class were given a poem. Each pupil selected sections that they felt were interesting or significant. The teacher organised the pupils into groups of three and each read out her or his chosen section and discussed with the 'questioner' reasons for the choice. At the end, after all three had introduced their chosen sections, and taken a turn as questioner and recorder, the recorder's notes were considered and the group drafted a collaborative written response to the whole poem.

Envoys: Once groups have carried out a task, one person from each group is selected as an 'envoy'. The envoy moves to a new group to explain and summarise their group's work and to find out what the new group thought, decided or achieved. The envoy then returns to the original group and feeds back. This is an effective way of avoiding tedious and repetitive reporting-back sessions. It also encourages the envoy to think about his/her use of language and creates groups of active listeners.

Example: A Year 7 history class was divided into small groups. Each group was given a different historical artefact to handle and speculate about. Once some ideas about origin, age and use had been generated, one group member went to the next group to introduce the artefact and explain the group's thinking. The new group contributed ideas before the envoy returned to the original group.

Rainbow groups: This is a way of ensuring that pupils are regrouped and learn to work with a range of others. After groups have done a task, each pupil in the group is given a number or colour. Pupils with the same number or colour then join up to form new groups comprising representatives of each original group. In their new groups, pupils take turns to report on their original group's work and perhaps begin to work on a new, combined task.

Example: A Year 7 science class was asked, in pairs, to draw a concept map of all their ideas about the term 'force'. Pairs then formed fours to compare lists and categorise their ideas into different kinds of force. The teacher then gave each pupil a colour (red, green, blue, yellow). New 'rainbow' groupings were then formed – all those with the same colour – and pupils were asked to introduce their force

categories to each other. Each new group was then asked to devise some scientific questions in preparation for a class discussion.

Jigsaw: A topic is divided into sections. In ‘home’ groups of four or five, pupils take a section each and then regroup into ‘expert’ groups. The experts work together on their chosen areas, then return to their home groups to report on their area of expertise. The home group is then set a task that requires the pupils to use the different areas of expertise for a joint outcome. This strategy requires advance planning, but is a very effective speaking and listening strategy because it ensures the participation of all pupils.

Example: A Year 9 history class was working on maps of the local town. Five maps were used, each from a different period of history. Home groups of five divided the maps up and then expert groups formed, with a checklist of questions to help them to interrogate their map. When home groups reformed, each pupil was required to introduce his or her map and talk through the information gleaned from it. Each group was then asked to summarise what it had learned about how the town had developed over a 200-year period, and to start speculating about the reasons for this.

Summary of group discussion strategies from *Teaching talking and learning at Key Stage 3*, Angela Martin (illustrator), (1997) National Curriculum Council Titles. © QCA. Used with permission.

5 Troubleshooting during group work – developing social skills

Problems during group work arise almost invariably because pupils lack the specific skills needed to get on with the task. As the research shows, challenging pupils in particular often lack the social skills necessary to engage effectively in group work.

Task 14

Classroom assignment: develop social skills

30 minutes

Below are some strategies to improve pupils’ social skills.

Think about a class that you teach whose skills you want to develop. Plan a group-work activity that develops these skills by using some of the suggested strategies.

How would you change the task if you wanted to focus on different skills?

Skill to develop	Strategies to use
Share and take turns	<ul style="list-style-type: none"> Provide each group with an object (e.g. a hat, a counter or a ball) that has to be passed round. Group members may only speak or contribute when they have the object. Give each group member a number (e.g. 1 to 6). You call out a number to indicate when each person should participate, e.g. ‘Contributions from number 2, please’, ‘Opinions from number 6, please’, ‘A prediction from number 4, please’, ‘Now one from number 5’, ‘Another explanation from number 1, please’.

[Task continues](#)

Skill to develop	Strategies to use
	<ul style="list-style-type: none"> Choose one pupil in each group to be a chairperson. Brief them so they understand it is their task to ensure each member takes a turn.
Listen to others' points of view	<ul style="list-style-type: none"> Agree/disagree: After hearing a point of view, any person giving a response has to begin by summarising the ideas, then adding 'I agree/disagree because ...', e.g. 'John said that the surface area was the biggest factor affecting friction; I disagree because ...'. Hot-seating and 'goldfish bowl': The seating is arranged so that two pupils with opposing views are seated opposite each other with a vacant seat next to them. The others are seated around them in a circle. The two in the middle each take a turn to express their views whilst others listen. When someone else wants to make a comment, they have to take the vacant seat and all have to listen. When they have finished commenting, they return to their own seat. This works well in Key Stage 3.
Participate, respond and make suggestions	<ul style="list-style-type: none"> Following a statement from one pupil, the person sitting three chairs to the left must respond. Provide each group member with a card giving a different sentence stem that relates to the task in hand, e.g. for exploring data about a country, cards might say 'I think the data on hours of sunshine show that ...', 'The rainfall data show ...', 'The evidence to support the view that this is an island is ...'. (You can easily accommodate pupils of all abilities by differentiating the question stems.) Each pupil has to use the sentence stem as the basis of their contribution. 'Round robin': Each group member in turn must make a suggestion, e.g. contributing one idea about America to pool prior knowledge, practising a sentence structure in MFL, or giving an evaluative comment in PE after watching a video of a team performance.
Cooperate with others	<ul style="list-style-type: none"> Provide group goals or targets, e.g. to prepare a presentation where all members have to take part. Provide the group with a task in which they can only succeed if they support each other. You could provide each pupil with a different piece of information which they have to share in order for the group to produce the required piece of work, e.g. an explanation of why an event took place, an overview of a topic, or a graph. Provide group rewards for success. Introduce tasks in a way that links behaviours to the learning outcomes required, e.g. 'What I am looking for is for each group to produce a concept map that shows how the key words are linked together. A good map will show clusters and why the words are linked. To complete this you will have to cooperate well.'

Task continues

Skill to develop	Strategies to use
Take on a role	<ul style="list-style-type: none"> • Give the group a structure where each member has a different role, e.g. researcher, summariser, checker, recorder and troubleshooter. Rotate roles in the next group activity.
Take the lead	<ul style="list-style-type: none"> • Teach pupils how to chair a group and give the role to a different pupil in each group session.
Make sure tasks are completed	<ul style="list-style-type: none"> • Break the task down into small steps. Provide one member of the group with a checklist of steps and time allocations.
Engage in exploratory talk	<ul style="list-style-type: none"> • Provide structures that will help pupils discuss ideas in a supportive way, e.g. insist that whenever someone makes a statement, they must justify it: 'I think ... because ...'. • Provide groups with a 'learning mat' to focus their talk. The mat could be a photocopied sheet of A3 containing a collection of linked images or newspaper cuttings, all numbered. You guide the discussion by saying, e.g., 'What do images 3 and 4 have in common?' or 'What do you think is the main point of article number 2?' A similar type of guided discussion can be done by providing an object to explore, e.g. a rock which pupils examine in order to describe its structure or a copy of a pupil's written answer to a question. • Stage or structure the talk around a prompt list, or task guidelines, or the oral equivalent of a writing frame.

Summary of research

A useful review of research in this area is contained in *Effective teaching: a review of the literature*, by David Reynolds and Daniel Muijs, some of which is included here.

It is important to acknowledge that there is firm evidence that cooperative group work is effective in improving attainment compared with pupils working alone (Johnson and Johnson 1999).

Some basics

Collaborative work in small groups is designed to develop 'higher order' skills. The key elements are the talking and associated thinking that take place between group members. However, putting pupils in groups is no guarantee that they work as groups (Bennett 1976), so much deliberate work needs to be done to make group work productive.

According to Johnson and Johnson (1999) the cooperative group has five defining elements:

- positive independence – pupils need to feel that their success depends on whether they work together or not (they sink or swim together);
- face-to-face supportive interaction – pupils need to be active in helping one another learn and provide positive feedback;
- individual and group accountability – everyone has to feel that they contribute to achieving the group goals;
- interpersonal and small-group skills – communication, trust, leadership, decision making and conflict resolution;
- group processing – the group reflecting on its performance and functioning and on how to improve.

Collaborative small-group work

An alternative approach to individual practice is the use of cooperative small-group work during the review and practice part of the lesson. This method has gained in popularity in recent years, and has attracted a lot of research interest in a number of countries, such as the United States (Slavin 1996). In other countries such as the United Kingdom this method is still underused, however. In a recent study in primary schools Muijs and Reynolds (2001) found that less than 10% of lesson time was spent doing group work.

The use of small-group work is posited to have a number of advantages over individual practice. The main benefit of small-group work seems to lie in the co-operative aspects it can help foster. One advantage of this lies in the contribution this method can make to the development of students' social skills. Working with other students may help them to develop their empathetic abilities, by allowing them to see others' viewpoints, which can help them to realise that everyone has strengths and weaknesses. Trying to find a solution to a problem in a group also develops skills such as the need to accommodate others' views.

Students can also provide each other with scaffolding in the same way the teacher can during questioning. The total knowledge available in a group is likely to be

larger than that available to individual students, which can enable more powerful problem solving and can therefore allow the teacher to give students more difficult problems than s/he could give to individual students.

The main elements of collaborative group work identified as crucial by research are:

Giving and receiving help

One of the main advantages of cooperative small-group work lies in the help students give one another. Not all kinds of help are necessarily useful, however. Just giving the right answer is not associated with enhanced understanding or achievement. In his review of research, Webb (1991) reports a positive relationship between giving content-related help and achievement. Giving non-content-related help did not seem to improve student achievement, though. Receiving explanations was found to be positive in some studies, and non-significant in others, this presumably because the receiver has to understand the help given and be able to use it. This may well require training the students to give clear help. Receiving non-explanatory help (e.g. being told the answer without being told how to work it out) was negatively or non-significantly related to achievement in the studies reviewed, while being engaged in off-task activities (e.g. socialising) was negative. In a more recent study Nattiv (1994) found that giving and receiving explanations was positively related to achievement, giving and receiving other help was slightly positively related to achievement, while receiving no help after requesting it was negatively related to achievement.

Necessary student social skills

Effective small-group work does require a significant amount of preparation, and a number of preconditions have to be met beforehand in order for it to be effective. Firstly, students must be able to cooperate with one another, and to provide each other with help in a constructive way. A number of studies have found that while small-group work is positively related to achievement when group interaction is respectful and inclusive, use of group work is actually negatively related to achievement if group interaction is disrespectful or unequal (Linn and Burbules 1994; Battistich et al. 1993). This is very possible, as many (especially young students and students from highly disadvantaged backgrounds) have been found to lack the social skills necessary to interact positively with peers.

Thus, students often lack sharing skills, which means that they have difficulty sharing time and materials and can try to dominate the group. This problem can be alleviated by teaching sharing skills, for example by using the Round Robin technique in which the teacher asks a question and introduces an idea that has many possible answers. During Round Robin questioning a first student is asked to give an answer, and then passes his turn to the next student. This goes on until all students have had a chance to contribute.

Other students may lack participation skills. This means that they find it difficult to participate in group work because they are shy or uncooperative. This can be alleviated by structuring the task so that these students have to play a particular role in the group or by giving all students 'time tokens', worth a specified amount of 'talk time'. Students have to give up a token to a monitor whenever they have used up their talk time, after which they are not allowed to say anything further. In this way all students get a chance to contribute.

Students may also lack communication skills. This means that they are not able to effectively communicate their ideas to others, obviously making it difficult for them to function in a cooperative group. Communication skills, such as paraphrasing, may need to be explicitly taught to students before small-group work can be used.

Finally, some students may lack listening skills. This can frequently be a problem with younger students who will sit waiting their turn to contribute without listening to other students. This can be counteracted by making students paraphrase what the student who has contributed before them has said before allowing them to contribute.

Organising small-group work

For small-group work to be effective, one needs to take a number of elements into account in the structuring of the task. Before commencing the task, the goals of the activity need to be clearly stated and the activity needs to be explained in such a way that no ambiguity can exist about the desired outcomes of the task. The teacher needs to make clear that cooperation between students in the group is desired. According to Slavin (1996) the goals need to be group goals, in order to facilitate cooperation, which need to be accompanied by individual accountability for work done in order to avoid free-rider effects. Giving both group and individual grades can help accomplish this, as can use of a shared manipulative or tool such as a computer.

Avoiding free-rider effects can be aided by structuring the group task in such a way that every group member is assigned a particular task. One way of doing this is by making completion of one part of the task dependent on completion of a previous stage, so students will pressure each other to put the effort in to complete the stage before them. Johnson and Johnson (1994) suggest a number of roles that can be assigned to students in small groups, such as:

- the summariser, who will prepare the group's presentation to the class and summarise conclusions reached to see if the rest of the group agrees;
- the researcher, who collects background information and looks up any additional information that is needed to complete the task;
- the checker, who checks that the facts that the group will use are indeed correct and will stand up to scrutiny from the teacher or other groups;
- the runner, who tries to find the resources needed to complete the task, such as equipment and dictionaries;
- the observer/troubleshooter, who takes notes and records group processes. These may be used during the debriefing following the group work;
- the recorder, who writes down the major output of the group, and synthesises the work of the other group members.

After finishing the group task the results need to be presented to the whole class and a debriefing focusing on the process of the group work (the effectiveness of the collaborative effort) should be held. A useful way of starting a debriefing session is by asking students what they thought had gone particularly well or badly during group work (the observers mentioned above should be able to do this).

Research has shown that cooperative groups should be somewhat, but not too, heterogeneous with respect to student ability. Groups composed of high and

medium, or medium and low, ability students gave and received more explanations than students in high-medium-low ability groups. Less heterogeneous groupings were especially advantageous for medium-ability students. When students of the same ability are grouped together, it has been found that high-ability students thought it unnecessary to help one another while low-ability students were less able to do so (Webb 1991; Askew and William 1995).

In this unit we have treated collaborative small-group work as a potential alternative to individual practice. However, many educators consider small-group work to be so advantageous that they have advocated structuring the whole lesson around the cooperative small-group work (e.g. Slavin 1996).

Extracts from *Effective teaching: a review of the literature*,
<http://www.teachernet.gov.uk/professionaldevelopment/nqtbehaviourmanagement>,
© Dr David Reynolds and Dr Daniel Muijs. Used with permission.

References

- Askew, M. and William, D. (1995) *Recent research in mathematics education* 5–16. Office for Standards in Education. ISBN: 0113500491.
- Battistich, V., Solomon, D. and Delucchi, K. (1993) 'Interaction processes and student outcomes in cooperative learning groups'. *Elementary School Journal* 94, 19–32.
- Bennett, N. (1976) *Teaching styles and pupil progress*. Open Books. ISBN: 0674870956.
- Dawes, L., Mercer, N. and Wegerif, R. (2000) *Thinking together*. Questions Publishing Company. ISBN: 1841900354.
- Johnson, D. W. and Johnson, R. T. (1994) *Joining together: group theory and group skills*. Prentice Hall. ISBN: 0205158463.
- Johnson, D. W. and Johnson, R. T. (1999) *Learning together and alone: cooperative, competitive, and individualistic learning*. Allyn and Bacon. ISBN: 0205287719.
- Kagan, S. (1997) *Cooperative learning*. Kagan Cooperative. ISBN: 1879097109.
- Linn, M. C. and Burbules, N. C. (1994) 'Construction of knowledge and group learning'. In K. Tobin (ed) *The practice of constructivism in science education*. Lawrence Erlbaum Associates. ISBN: 0805818782.
- Lou, Y., Abrami, P. C., Spence, J. C., Paulsen, C., Chambers, B. and d'Apollonio, S. (1996) 'Within-class grouping: a meta-analysis'. *Review of Educational Research* 66, 423–458.
- Mercer, N., Wegerif, R. and Dawes, L. (1999) 'Children's talk and the development of reasoning in the classroom'. *British Educational Research Journal* 25, 95–111.
- Muijs, D. and Reynolds, D. (2001) *Effective teaching: evidence and practice*. Sage (Paul Chapman). ISBN: 0761968814.
- National Curriculum Council and the National Oracy Project (1997) *Teaching Talking and learning in Key Stage 3*. National Curriculum Council titles. ISBN: 1872676278.

- Nattiv, A. (1994) 'Helping behaviours and math achievement gain of students using cooperative learning'. *Elementary School Journal* 94, 285–297.
- Palincsar, A. S. and Brown, A. L. (1985) 'Reciprocal teaching of comprehension fostering and comprehension monitoring activities'. *Cognition and Instruction* 1, 117–175.
- Slavin, R. E. (1991) *Student team learning: a practical guide to cooperative learning*. National Education Association. ISBN: 0810618451.
- Slavin, R. E. (1996) *Education for all*. Swets and Zeitlinger. ISBN: 9026514735.
- Webb, N. M. (1991) 'Task-related verbal interaction and mathematics learning in small groups'. *Journal for Research in Mathematics Education* 22, 366–389.

Next steps

This unit has explored an aspect of teaching and learning. You may wish to develop your ideas further, to consolidate, apply ideas in different contexts or explore an aspect in more depth and innovate.

Reflect

What have been the key learning points for you?

What has been the impact on pupils?

Here are some suggestions as to how you may develop practice further:

- Look at a unit you are about to teach. What opportunities are there to use the group discussion strategies in [section 4](#)? Select one plan and test it out. How effective was it? How might you improve further?
- Work with a colleague who teaches the same class and try out the different group discussion strategies of listening triads, envoys, rainbow groups and jigsaws. You will need to teach pupils the 'rules' of each as you proceed, and this will take time. It is best to plan opportunities over two terms. Which methods work best with your pupils?
- Work with a colleague who teaches the same class and investigate which of the strategies suggested for developing social skills in [task 14](#) is most effective with this class by testing them out in turn.
- Work with a colleague and, after considering the strategies for structuring group work, devise some of your own. There are a number of others that can be found in the literature such as hot-seating and goldfish bowl.

For further reading, the following publications are recommended:

- Joyce, B. et al. (2002) *Models of learning: tools for teaching*. Open University Press. ISBN: 0335210155.
- Mercer, N. (2000) *Words and minds: how we use language to think together*. Routledge. ISBN: 0415224764.

Setting future targets

Having considered your next steps, you may wish to set yourself some personal targets to support your own continuing professional development. You could use these ideas to inform your performance management discussion.

-

-

Task 15

Setting your targets

40 minutes

When setting targets for the future you may want to discuss the possibilities with a colleague or your line manager.

Whatever you decide to do, you will need to consider the following.

- What are your objectives for the next year?
- What are the expected outcomes in terms of pupils' achievements?
- What strategies will you employ to achieve these outcomes?
- How will you track progress over the year?
- How will you know whether you have been successful or not?

Copies of this document may be available from:

DfES Publications

Tel: 0845 60 222 60
Fax: 0845 60 333 60
Textphone: 0845 60 555 60
e-mail: dfes@prolog.uk.com

Ref: DfES 0433-2004 G

© Crown copyright 2004

Produced by the
Department for Education and Skills

www.dfes.gov.uk

If this is not available in hard copy it can be
downloaded from:

www.standards.dfes.gov.uk

The content of this publication may be reproduced free of charge by schools and local education authorities provided that the material is acknowledged as Crown copyright, the publication title is specified, it is reproduced accurately and not used in a misleading context. Anyone else wishing to reuse part or all of the content of this publication should apply to HMSO for a core licence.

The permission to reproduce Crown copyright protected material does not extend to any material in this publication which is identified as being the copyright of a third party.

Applications to reproduce the material from this publication should be addressed to:

HMSO, The Licensing Division, St Clements House,
2-16 Colegate, Norwich NR3 1BQ
Fax: 01603 723000
e-mail: hmsolicensing@cabinet-office.x.gsi.gov.uk

Disclaimer

The Department for Education and Skills wishes to make clear that the Department and its agents accept no responsibility for the actual content of any materials suggested as information sources in this document, whether these are in the form of printed publications or on a website.

In these materials icons, logos, software products and websites are used for contextual and practical reasons. Their use should not be interpreted as an endorsement of particular companies or their products.

The websites referred to in these materials existed at the time of going to print. Tutors should check all website references carefully to see if they have changed and substitute other references where appropriate.